

What is claimed is:

5 1. A prosthesis for a human patient comprising allograft or xenograft tissue having a polypeptide growth factor associated therewith, said polypeptide growth factor being effective to stimulate the affiliation of viable cells with said tissue.

2. The prosthesis of claim 1 wherein said binding of said polypeptide growth factor to said tissue involves specific binding interactions.

10 3. The prosthesis of claim 1 wherein said binding of said polypeptide growth factor to said tissue involves covalent bonding.

15 4. The prosthesis of claim 1 wherein said binding of said polypeptide growth factor to said tissue involves a linker molecule.

5. The prosthesis of claim 1 wherein said tissue comprises crosslinked tissue.

6. The prosthesis of claim 1 wherein said tissue comprises uncrosslinked tissue.

20 7. The prosthesis of claim 1 wherein said tissue comprises a porcine heart valve.

8. The prosthesis of claim 1 wherein said tissue comprises bovine pericardial tissue.

25 9. The prosthesis of claim 1 wherein said polypeptide growth factor comprises vascular endothelial growth factor.

30 10. The prosthesis of claim 9 wherein said vascular endothelial growth factor comprises a protein selected from the group consisting of bVEGF164, bVEGF120, hVEGF165, hVEGF121, VEGF II, hVEGF80, VEGF-B, VEGF2, modified active forms thereof, and combinations thereof.

11. The prosthesis of claim 1 wherein said tissue comprises synthetic tissue.

12. An article comprising crosslinked tissue with associated VEGF.

13. The article of claim 12 wherein said crosslinking involves glutaraldehyde moieties.

14. A prosthetic heart valve comprising associated VEGF.

15. The prosthetic heart valve of claim 14 wherein said prosthetic heart valve comprises a porcine heart valve.

16. A method of producing a prosthesis for a human patient, said prosthesis comprising allograft or xenograft tissue, said method comprising binding polypeptide growth factor to said tissue.

17. The method of claim 16 further comprising incubating said tissue having bound polypeptide growth factor with viable cells in vitro to affiliate said cells with said tissue.

18. The method of claim 16 wherein said cells comprise human cells.

19. The method of claim 16 wherein said cells comprises cells obtained from an intended recipient of said prosthesis.

20. A method of modifying a substrate, the method comprising incubating viable cells in vitro with tissue to affiliate said cells with said substrate, said substrate comprising associated polypeptide growth factor.